

Chapter 4

IRISH MANUFACTURERS' TRANSPORT COSTS – RESULTS OF TWO SURVEYS

J. Durkan and A. Reynolds-Feighan

This paper looks at Irish manufacturers' transport costs in 1990 and proposes that further description and analysis of costs for Ireland is necessary, since little is known about costs in general, or in relative terms compared with our EC partners. This paper summarises results from a lengthy report submitted to the EC in October 1990 in which the detailed results of two surveys on transport costs were presented. The paper is set out in five sections. In the first section descriptions of Irish industrial production and of trade patterns are given along with a brief overview of the transport sector. In the second section, the results of a Manufacturers' Transport Cost Survey, undertaken in May 1990, are presented and discussed. The results of a second survey (of shipping agents) are reported in Section 3. The implications of the results of the two surveys, and the design of further research in this area, are discussed in Section 4. The last section presents the key conclusions and recommendations from the research.

1: BACKGROUND TO THE STUDY IRISH MANUFACTURING AND EXPORT TRADE

The importance of Irish transport costs is dependent on the type of goods being traded and the scale of production of these goods. In this section we sketch a very general picture of Irish industrial structure and the Irish export trade market in order to point out regional patterns of production within Ireland and the principal routes of export for produce.

The main data source on manufacturing industry in Ireland is the annual Census of Industrial Production. The Census data provide information on the structure of production, employment, inputs, and outputs. The Census data do not cover all manufacturing, as firms below a certain size are excluded. However when allowance is made for this, and

updating the data using available indicators, it can be seen that manufacturing industry as a whole had a total turnover in 1990 of about £18bn and employed approximately 200,000 people in 1,600 enterprises spread throughout the country in 5000 different locations. In terms of net output, the two principal sectors are (a) the metals and engineering industries (35 per cent of total industrial output) and (b) the food sector, accounting for 22 per cent of total output. These sectors also account for roughly one half of total industrial employment in Ireland. The third major group of industries consists of non-metallic mineral products and chemicals (accounting for 18 per cent of total industrial output and just under 13 per cent of total industrial employment).

Table 1 shows the regional distribution of industrial net output and employment in the 8 planning regions. In 1987, about 30 per cent of net output was produced in the East region, with 18.6 per cent produced in the Southwest and roughly 10 per cent in each of the Northeast, Southeast and West regions. The table shows the average employment and average output per establishment.

Table 1: *Regional Industrial Production and Employment in Ireland in 1987*

<i>Region</i>	<i>Percentage of Total Net Output</i>	<i>Net Output per Establishment (£'000)</i>	<i>No. Persons Employed per Establishment</i>
East	(29.3)	1191	38
Nth-East	(9.7)	1820	37
Sth-East	(10.2)	1449	45
West	(9.2)	1905	37
Sth-West	(18.6)	2002	40
Mid-West	(7.9)	1337	44
Nth-West	(2.3)	615	36
Midlands	(3.4)	761	36
Not attributable	(9.6)	4422	118
State	(100)	1487	42

Source: Census of Industrial Production, 1987, CSO, Dublin.

Irish manufactured produce is the key component in our export trade, accounting for 80 per cent of the total value of exports. The structure of industry has been heavily influenced by the resource base of the economy, and by the industrial promotion policies of governments since the late 1950s. The Food subsector is characterised by commodity production, e.g., butter, cheese, beef with the domestic market accounting for about one-third of sales. For technical reasons relating to the seasonality of production and for historical reasons, both before and after EEC entry

and, given overproduction relative to demand at current prices along with the system of intervention purchasing, a significant proportion of production has tended to be bulk production of commodities, rather than specialist high valued products. The Drink and Tobacco subsectors are primarily geared to the home market, though both have important export sales. The Food, Drink and Tobacco sector as a whole is dominated by a small number of enterprises, accounting for the bulk of turnover. The Modern sector, comprising Chemicals (including Pharmaceuticals) Office and Data Processing Equipment and Electrical Engineering, accounts for one-third of turnover of manufacturing, and just under 20 per cent of the number of enterprises.

The Modern sector owes its existence in Ireland primarily to the industrial promotion policies pursued by Governments since the late 1950s when industrial policy became more outward looking. Industrial policy uses as its instruments, grant and tax incentives. These incentives, plus the targeting of certain sectors (pharmaceuticals and electronics) have resulted in a rapid growth in the modern sector of the economy. This sector is characterised by:

- foreign ownership
- reliance on export markets for sales
- purchase of material inputs from abroad
- transfer pricing to limits permitted by tax authorities to maximise Irish based profits
- high gross profits relative to sales

The rest of manufacturing accounts for one-quarter of turnover, 60 per cent of the number of enterprises and the greater part of total employment. Output is varied and much less homogeneous than in the Food and Modern sectors, i.e., much less bulk production and less standardised commodities. Turnover per enterprise in this sector, at IR£3.7 million in 1987 compares with IR£21.5 million in the Food, Drink and Tobacco sector and IR£17.4 million in the Modern sector.

In examining the patterns of Irish exports, it is noted that the Central Statistics Office (CSO) use a different aggregate classification of produce compared with the NACE classification used to present industrial production. Accordingly, some primary produce is included in the trade figures reported in the tables below. Irish exports consist in large measure of (i) metals and engineering produce (ii) food, drink and tobacco products (iii) non-metallic mineral and chemical products.

Most of the produce for export is moved to foreign markets by sea (73 per cent of the total volume; 66 per cent of the total value) with 27 per

cent of the volume being moved through "land frontier stations" (i.e., to Northern Ireland and Northern Ireland ports) and less than 1 per cent of the total volume being moved by air. Table 2 shows the significance of air transport however in terms of the value of exports shipped abroad (14 per cent of total export value). This table also shows the average value per tonne of Irish exports in 1989 by CSO commodity category and major port of exit. Comparing the mean Irish value per tonne with that for other EC countries (Table 3) would on face value indicate a great success for Irish industrial policy, since Ireland has the highest value of all EC12 countries. The data are distorted by transfer payments (such as the over-valuation of value-added on intermediate goods produced in Ireland, see Kennedy, Giblin and McHugh, 1988). It was not possible to obtain more realistic estimates..

The bulk of export produce leaves Ireland through ports (including airports) in Leinster (77 per cent of value; 48 per cent of volume) or ports in Munster (21 per cent of value; 48 per cent of volume) reflecting the pattern of location in the country. For producers in the West, parts of the Southwest, the Midlands and the Northwest, we would expect that they incur greater transport cost penalties in accessing foreign markets because they must first access Irish ports of export. We note that manufacturing establishments in these regions are also smaller in scale in terms of employment levels. In Section 3 of this paper, we present the costs for producers in different regions of getting loads to ports in Ireland and to foreign destinations.

In 1989 the percentage value of total exports going to foreign markets was as follows: 28 per cent of exports go to Great Britain, 5.4 per cent to Northern Ireland and 48 per cent to other EC countries. In terms of volume, 35 per cent of exports are destined for Great Britain, 20 per cent for Northern Ireland and 36 per cent for other EC countries.

1.1: The Irish Transport System

As an island nation, international transport to and from Ireland is obviously dominated by air and sea modes. Within Ireland, 90 per cent of freight movements are by road. The high dependency on road transport occurs because of the dispersed nature of the population in a country with a generally low population density. Rail transport has declined continually in the last 50 years and is not a viable alternative for two main reasons: (1) the small size of the island makes road transport more efficient since distances are relatively short; the possibility of rail connections into other networks does not arise for an island country while it is possible for other small

Table 2: 1989 Value of Average Tonne of Irish Exports (IRE)

Type of commodity	Cork	Seaports			Waterford	Other seaports	All sea-ports	Land stations	Airport	Total
		Dublin	Dun Laoghaire	Rosslare						
TOTAL	482	2719	7719	5203	2168	201	1459	1128	105050	1605
Agricultural products & live animals	212	916	1840	977	478	181	599	423	58000	545
Foodstuffs & animal fodder	1692	1987	1971	2288	2103	796	1766	1096	6500	1567
Solid mineral fuels	0	71	167	65	61	111	71	74	0	72
Petroleum products	80	2000	0	0	0	0	86	375	0	95
Ores & metal waste	600	323	1000	1000	400	400	334	97	0	320
Metal products	280	1471	3000	1875	3500	500	459	852	0	543
Crude & manuf. minerals, building materials	417	238	200	231	417	16	49	76	0	58
Fertilisers	94	0	0	83	0	67	81	103	0	85
Chemicals	679	5531	12625	17917	6514	197	1121	2344	322500	1678
Machinery, transport equip., manuf. articles & miscellaneous articles	1636	9642	22156	14453	4333	543	9011	4056	91214	8336
Not classified	900	857	500	1000	923	266	500	1077	99000	1145

Source: CSO Statistical Bulletin.

Table 3: *1987 Value of Average Tonne of Exports and Imports for All EC Countries (in current Irish £)*

<i>EC States</i>	<i>1987 Average Value of Exports</i>	<i>1987 Average Value of Imports</i>	<i>1988 Average Value of Exports</i>
EUR12	686.42	399.44	742.92
Belgium-Luxembourg	544.57	347.51	570.31
Denmark	926.25	426.46	868.54
Germany	1131.82	453.19	1158.20
Greece	222.41	330.63	252.68
Spain	411.25	288.91	457.47
France	671.53	425.38	742.51
Ireland	1335.20	495.98	1393.71
Italy	1199.05	348.87	1239.53
Netherlands	348.37	274.12	360.35
Portugal	762.09	381.21	771.02
UK	580.57	618.35	733.91

Source: Eurostat Trade Statistics

countries like Belgium and Luxembourg, (2) the dispersed nature of the population acts against rail being an economically viable mode. While a range of different grades of road may be designed to suit varying population and traffic levels, the basic costs associated with single rail lines can be hard to justify on low-volume routes.

While Ireland has the highest road mileage per capita in the EC, it has one of the lowest motorway/dual carriageway mileages per capita. The quality and condition of the road network is poor and undermaintained. The main routes of the network comprise the national road network (national primary and secondary routes) which accounts for 6 per cent of the total network mileage and carries 34 per cent of the total volume of traffic. The regional road network accounts for a further 11 per cent of the network length with the remaining 83 per cent being made up of county and urban roads.

Government expenditure on road maintenance has been lacking by international standards for the last 10-15 years, as has been expenditure on new road construction and improvements. The Government's *Operational Programme for Road Development* published in 1989 outlined a wide-ranging series of new projects and improvements to be made to the road network in the next 3-4 years. These projects are heavily funded by the EC structural funds in an effort to improve Irish manufacturers' and consumers' cost disadvantages as a peripheral region in Europe. One of

the main motivations for undertaking the two surveys reported below was to try to establish benchmark costs for Irish manufacturers transporting goods to the EC and other foreign markets. Very little research has been undertaken in this area. In order to be in a position to evaluate the economic impacts of the EC and Irish government's investments in infrastructure, it is necessary to have an idea of transport costs before the new projects come on stream.

In this brief sketch of the Irish industrial sector and pattern of export trade, we have seen that the main products produced and exported are metals and engineering produce, food, drink and tobacco and chemical and mineral products. The average value of exports is relatively high by EC standards, suggesting that Irish manufacturers have been moving towards producing goods with a relatively low transport cost component. The scale of production varies in the planning regions, with the West, Northeast, Northwest and Midlands regions having the lowest mean employment levels per establishment. The single biggest destination for our produce is still the UK, though the proportion of our total exports going to the UK has been declining gradually over the last 20 years. As we shall see in the next sections, this fact has important implications for the overall scale of our total transport costs.

2: SURVEY OF MANUFACTURERS' TRANSPORT COSTS

Irish manufacturers were surveyed in May/June 1990 and questioned on their transport costs, typical load shipments and destinations. Manufacturers were also asked to identify factors which they considered added to their transport costs, such as delays at ports, road congestion, etc.. The manufacturers survey was undertaken by The Economic and Social Research Institute and consisted of a postal questionnaire of firms on the Institute's investment survey register. In designing the survey, no previous questionnaires could be consulted as a published study of this kind had not been undertaken before. 74 per cent of respondents exported to the EC countries, of which 56 per cent exported to Great Britain and 24 per cent exported to Northern Ireland. The number of firms replying to the survey and exporting to the remaining 10 EC countries was small and details on specific costs and arrangements were scarce.

In the manufacturers survey 154 survey forms were completed and returned: some of those surveyed did not answer all of the questions asked and accordingly the sample size is quite small for some of the detailed

enquiries on distances travelled, costs and logistics of transporting produce. In the summary review presented below, only the principal findings are reported. Table 4 shows some general characteristics of the sample firms.

Table 4: *Description of Firms in the Survey by Sector*

<i>Sector</i>	<i>Food</i>	<i>Modern</i>	<i>Other</i>	<i>Total</i>
No. firms	34	55	58	147
% firms in survey	23.1	37.4	39.4	100
Average sales revenue (£m)	32.0m	37.0m	13.4m	26.5m
Total sales revenue (£m)	1086.3m	2032.3m	777.0m	3895.6m

The survey of manufacturers distinguished between costs incurred in the domestic and in foreign markets. The main findings are summarised in Table 5. Overall, the direct transport costs associated with shipping goods incurred by manufacturing firms were 4 per cent of sales revenue.

There are differences between sectors and between domestic and foreign transport costs relative to sales revenues. Transport costs in the Food, Drink and Tobacco sector are higher than in the Modern and other sectors for both domestic and foreign sales. Transport costs are lowest relative to sales revenue in the Modern sector.

Table 5: *Manufacturers' Transport Costs by Sector*

	<i>Food</i>	<i>Modern</i>	<i>Other</i>	<i>Total</i>
% of sales to domestic market	65	35	50	47.5
Domestic transport costs as % domestic sales revenue	5.5	3.3	3.4	4.0
Foreign transport costs as % foreign sales revenue	4.8	2.6	4.3	3.8
Overall transport costs as % of sales revenue	5.3	2.8	3.8	3.9

An interesting result is that in both the Food, Drink and Tobacco sector and in the Modern sector the ratio of transport costs to sales was lower in foreign markets than in the domestic market. As noted earlier, bulk food exports are the norm, while in the domestic market shipments are typically smaller and sent to many destinations. The costs of shipping bulk foodstuffs abroad, relative to their value is low, because of the standardisation of product and load. Similarly in the Modern subsectors (e.g., computers and pharmaceuticals) some would sell trivial amounts on the domestic market, so that there is a lack of direct comparability between products. More important is that firms in this sector are generally engaged in inter-company trade, where goods are shipped, not to final customers, but to other subsidiaries of parent companies. Transfer pricing, where sales revenue figures are artificially high, can also lead to an understatement of relative transport costs. Finally, and this applies to all sectors, VAT is charged at a zero rate on transport services provided to exporters – this reduces the cost of moving goods abroad relative to the cost of internal trade.

While these explanations are reasonable and must be taken on board, it would be quite mistaken to deduce that transport costs of goods ex-factory to consumers are lower on export than on domestic sales. What these explanations offer are insights into why the differences in Table 5 appear in the first place. Products are not standardised, i.e., “food” on the domestic market is not the same as “food” on foreign markets. Nor is the concept of customer clear. On the domestic market the transport cost may be the cost of delivery to a retail outlet, while the foreign cost may be the cost to a storage point abroad, and there could well be many stages thereafter before the goods reach a final retail outlet or final customer.

It would also be mistaken to assume that these figures represent total transport costs. No estimate is available on the direct and indirect transport costs of inputs, some manufacturers have no direct transport costs on sales as goods are sold ex-factory, and finally, no estimates are available on the transport costs of the final purchaser (e.g., households, other enterprises).

There is very little research available in this area with which to compare the findings of this survey. The Irish government's *Operational Programme for Road Development* estimated that the ratio of transport costs to value of export sales was in the region of 9 per cent to 10 per cent. This figure was based on estimates from two unpublished studies which estimated the additional costs to major trade centres in Europe from Irish origins compared to locations on the European mainland in Belgium and Holland. The results given in Table 4 based on our survey give a considerably lower figure for firms exporting from Ireland.

2.1: *Comparison with Other Studies*

Two UK studies provide comparative data at national and regional levels. A 1984 study "Transport Costs in a Peripheral Region" carried out by PEIDA, Planning and Economic Consultants, for the European Commission, the Industry Department for Scotland, and the Department of Economic Development, Northern Ireland, produced results for regions within the UK that are somewhat similar to those given above. The PIEDA study, presented total domestic and foreign transport costs as a percentage of total domestic and foreign turnover and also standardised for industrial structure estimating costs on the basis that the structure of production was similar in the relevant regions. The results are shown below in Table 6. The "crude" results refer to the actual costs and the standardised costs are adjusted to take account of industrial structure.

Table 6: *Transport Costs per cent Turnover in UK*

<i>Region</i>	<i>Crude %</i>	<i>Standardised %</i>
Scotland, Central	3.5	3.3
Scotland, Peripheral	4.0	3.6
Northern Ireland, Central	3.3	3.8
Northern Ireland, Peripheral	5.5	3.1
South East England	3.3	2.9

These order of magnitude of costs results are very similar to those of our survey, though our results are higher, suggesting a cost disadvantage relative to Britain and Northern Ireland.

Diamond and Spence (1988) examined expenditure on transport relative to operating costs. The results are not directly comparable with those of our surveys. However, since operating costs for all manufacturing in Ireland represents 75 per cent of sales revenue it is possible to make a general comparison of the results. Transport costs for all manufacturing were estimated at 4.7 per cent of operating costs by Diamond and Spence.

When our results are adjusted at an aggregate level to represent transport costs relative to operating costs, the proportion is 5.2 per cent compared with 4.7 per cent in Britain. At a disaggregated level, the British results are significantly higher in pharmaceuticals where British industry is primarily involved in the production of finished products, while Irish industry is primarily involved in the production of fine chemicals. In the fine chemicals sector, transport costs are lower relative to sales and operating revenue. The British results are also higher in food, but they refer to selected food processing whereas our results are for all food, drink

and tobacco sectors. The effect of standardising by product would thus be to accentuate the differences between Irish and British costs.

What general conclusions can we draw from the two surveys relative to our survey and other Irish data? First, transport costs are higher relative to turnover in Ireland than in the UK, being 3.3 per cent in the UK and 4 per cent in Ireland. Second, when operating costs rather than turnover are considered, then this result is confirmed, the relative position being 5.2 per cent as compared with 4.7 per cent. When allowance is made for differences in industrial structure (particularly with regard to food and pharmaceuticals) the differences are greater with the gap widening between Irish and British costs. Third, when transport services are purchased rather than provided "in house" transport is significantly less in Ireland (2 per cent of operating costs) than in Britain (3.1 per cent of operating costs). There is also evidence of much greater reliance in Britain on air transport.

3: *SURVEY OF IRISH SHIPPING AGENTS*

The shippers survey was aimed at finding out the precise costs of movement of standard loads from various locations in Ireland to a series of EC and other destinations. Eleven shipping agents gave detailed cost information for 20ft and 40ft containers moved from Ireland through the ports of Dublin, Cork, Waterford, Rosslare, Belfast and Warrenpoint. The questionnaire asked shippers to provide information on the cost of transport from several Irish origins to three destinations for a typical load. The destinations varied from firm to firm as shippers specialise in providing service to a limited number of foreign ports. The aim was to obtain information on the following items: (1) internal cost differentials in Ireland (2) cost savings associated with larger loads (3) realistic costs of transport to European and other foreign destinations.

Table 7 shows the transport costs to the various origins and destinations from the port used by the shippers. The indexed cost is given to maintain the confidential rates quoted by the shippers. The base index of 100 is for Dundalk-Newcastle (via Warrenpoint). Most shippers operated from two or three ports. The results of the survey are of a high quality being consistent with respect to distance travelled. Table 8 gives the proportional increase in costs of shipments for origins in different regions of Ireland (this essentially captures the additional cost of internal road transport en route for the main Irish ports). The average percentage of internal Irish transport costs to total transport costs to European destinations is also

Table 7: *All Prices in IRE 40 Ft Containers Cost from Locations in Ireland*

<i>Destination</i>	<i>Dublin</i>	<i>Cork</i>	<i>Galway</i>	<i>Limerick</i>	<i>Sligo</i>	<i>Letterkenny</i>	<i>Dundalk</i>	<i>Athlone</i>	<i>Waterford</i>
London	150	200	192	200	208	208	133	150	200
Birmingham	133	183	142	183	158	158	117	133	183
Newcastle	117	167	158	167	142	142	100	117	167
East Coast USA	669	669	756	723	760	766	719	733	669
Gulf Coast USA	690	690	777	666	781	787	740	754	690
West Coast USA	711	711	798	765	802	808	761	775	711
Frankfurt	283	283	350	317	350	383	300	317	317
Lyons	350	383	417	367	417	450	367	383	400
Milan	450	433	517	467	517	550	467	483	483
Tokyo	460	455	517	487	480	550	488	498	491
Sapporo	779	774	836	869	799	869	807	817	810
Rotterdam	150	176	231	203	231	256	204	213	209
Amsterdam	169	196	250	223	250	276	224	233	229
Antwerp	172	199	253	226	253	279	227	236	232
Madrid	408	494	489	480	451	439	399	430	454
Bilbao	347	433	428	419	391	379	338	370	394
Barcelona	444	529	524	515	487	474	434	465	490
Paris	267	267	267	267	300	333	300	300	250
Strasbourg	317	317	317	317	350	383	350	350	300
Hamburg	215	225	292	258	292	334	248	258	251
Hanover	236	245	312	267	312	305	268	279	272
Berlin	345	342	421	376	421	414	378	388	381
Lisbon	321	401	392	384	384	401	347	358	375
Rome	540	620	611	603	460	620	566	577	594

given for several EC countries. Table 9 shows the average percentage of total transport costs to EC destinations incurred within Ireland. Finally, Table 10 shows the average percentage increase in costs for a 40ft container compared to a 20ft container.

From the tables, it can be observed that there are considerable variations in the costs of transport from the different origins in Ireland to EC

Table 8: *Cost Variations in Ireland*

<i>Origin</i>	<i>Dublin or Cork</i>	<i>Major Port</i>	<i>Warrenpoint</i>
Dublin	100		113
Cork	100		150
Limerick	108		150
Galway	123		144
Sligo	123		156
Letterkenny	138		156
Dundalk	108		100
Athlone	115		113
Waterford	109		150

Table 9: *Average Percentage of Total Transport Costs Paid on Transport Within Ireland en Route to European Destinations*

<i>Destination</i>	<i>Average % Transport Costs</i>
UK	37.0
Italy	18.6
Holland	36.8
Belgium	33.8
Spain	13.1
Portugal	16.4
France	12.2
Germany	16.6

Table 10: *Percentage Increase in Costs for 40 Foot Containers over 20 Foot Containers*

<i>Origin</i>	<i>Destinations</i>			
	<i>W. Germany</i>	<i>France</i>	<i>Italy</i>	<i>Average</i>
Dublin	31	11	50	31
Cork	31	15	63	36
Limerick	36	10	47	31
Galway	31	14	48	31
Sligo	17	14	48	26
Letterkenny	28	13	43	28
Dundalk	29	10	47	29
Athlone	27	15	53	32
Waterford	34	14	53	34

destinations. Large increases from Irish origins to central European cities, compared to costs from mainland European ports to central European cities can be observed. For example Dublin-Amsterdam has an indexed cost of 169 units. This increases by only 27 per cent to continue to Hamburg and by 67 per cent to Frankfurt. Moving goods from Ireland to the larger European markets is considerably more costly for Irish manufacturers, even when use is made of larger containers.

Looking at the internal costs, the average cost from origins in each province to the nearest port offering service were computed as a percentage of total transport costs to all EC destinations. The East coast of Ireland has the lowest internal costs (9 per cent of total costs to Europe). The average costs to ports in Ireland from the South is 23.6 per cent, it is 26.6 per cent from the West and 38 per cent from the Northwest. Obviously for manufacturers in the Northwest, shipment via Larne is a more viable option, because of its geographical proximity, superior road conditions and more flexible working hours.

While government documents like the *Operational Programme on Peripherality* generally present the country as suffering from considerable disadvantages due to her peripherality, this analysis highlights the regional disparities within Ireland and the heightened cost disadvantage to those exporting from the West, Northwest and parts of the South.

In looking at costs for 20 ft containers versus 40 ft containers, it may be noted that clients of shipping agents on average pay an additional 31 per cent, highlighting the considerable scale economies associated with larger loads. This additional charge however varies by both origin and destination. For the more remote origins, the increase in cost for 40 ft containers is quite low. The quotations given are for clients using these containers regularly, and it must be remembered that the costs are considerably higher when groupage rates are given. The shippers indicated that the typical load was a 20 foot container.

Shippers were also asked to indicate any measures that they felt could be introduced to reduce costs of transport. Firms highlighted the high levels of VAT and excise duty as this effected vehicle ownership levels. In addition insurance, maintenance and spare parts, road tax and fuel prices were also mentioned by a couple of respondents. Customs clearance charges, port charges, and delays in loading cargo at Dublin port as well as the limited opening hours were seen as factors reducing the potential flows of traffic at Dublin particularly and contributing to increased costs. Several shippers suggested that better use of container space and better co-ordination of import and export activities would reduce costs, as per unit costs would then be minimised.

4: IMPLICATIONS AND DISCUSSION

There are considerable variations in the value of commodities being exported from Ireland: most goods are shipped by sea and the relative costs of getting produce to the Irish ports in the first place can be very high for manufacturers located in peripheral regions of Ireland. The ports with the heaviest traffic are located on the East coast and firms located in Leinster have considerable advantages over firms located in the West, Northwest and parts of the South.

Taking one example, it costs 42 per cent more to ship goods from Sligo to Newcastle compared to the costs of shipping from Dundalk to Newcastle. The cost from Galway is 58 per cent higher. While differentials of this order of magnitude have serious implications for export trade, they also have serious implications for domestic markets. Manufacturers in peripheral regions in Ireland are competing with British manufacturers in

the largest domestic market at Dublin. Taking account of the costs of importing raw materials to peripheral regions, these regions suffer competitive disadvantages within Ireland as well as externally.

Considerable economies of scale exist when larger containers are used for shipping produce abroad. The charges are generally invariant to weight. However the structure of Irish industry, particularly indigenous manufacturing, does not allow full advantage to be taken of these savings, so costs remain higher for movement of goods internally and internationally.

Transport costs in Ireland in general are high by EC standards: VAT and duty paid on vehicle and transport equipment are at higher levels than elsewhere in the EC. In combination with this, the tax and duty paid on spare parts makes the fixed cost of transport services very high. The running costs are above average: a 1987 comparison of petrol prices showed that Irish excise duty was 362 ecu/1000 litres, the EC average being 338 ecu/1000 litres. VAT paid on petrol is between 5 per cent and 10 per cent higher in Ireland than in other EC countries. Insurance costs and road taxes further increase the running costs associated with transport services.

The EC proposals aim to harmonise VAT and excise duty rates, so that internal Irish transport costs should be reduced in the medium term. Currently, transport services associated with the export of produce from Ireland are charged a zero VAT rate: EC proposals on VAT will extend to include these services. The introduction of cabotage in the European freight market will provide increased service to Irish manufacturers for exporting produce: it will also bring increased competition to domestic markets.

A major component in the effort to reduce transport costs to and from Ireland and within Ireland is the investment in improvements to the road network. There is urgent need for substantial repairs to (and in many cases reconstruction of) many hundreds of kilometres of road. The network is in poor condition generally and in order to gain any real advantages, road infrastructure investment particularly must be proportionally higher in Ireland than elsewhere in Europe.

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